

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Robert Lord on June 18th, 2010.
3. Replace all prior claims listing with the following:
 1. (Currently Amended) A method for managing resources of a computer system, comprising:
 - creating a first resource pool and a second resource pool within the computer system,
 - wherein the computer system comprises a first resource and a second resource;
 - allocating a first portion of the first resource to the first resource pool;
 - allocating a second portion of the first resource to the second resource pool;
 - allocating a first portion of the second resource to the first resource pool;
 - allocating a second portion of the second resource to the second resource pool;
 - creating a first container and a second container within the first resource pool;
 - specifying resource requirements for the first container; wherein the resource requirements for the first container specify a first requirement for the first resource and a first requirement for the second resource;
 - determining whether the resource requirements for the first container are valid, wherein the resource requirements for the first container are valid when the first requirement for the first resource does not exceed the first portion of the first resource and the first requirement for the second resource does not exceed the first portion of the second resource; [[and]]

activating the first container only if the resource requirements for the first container are ~~first~~-valid, wherein activating the first container enables at least one system user to use the first container[.];

upon receiving an indication of a requirement to deactivate the first container,
deactivating the first container by releasing the first requirement of the first
resource and the first requirement of the second resource from the first
container;
transferring a project executing in the first container to a default container before
the first container is deactivated; and
executing the project in the default container.

2. (Currently Amended) The method of claim 1, further comprising:
executing a project within the first container while [[once]] the first container is active.
3. (Previously Presented) The method of claim 2, further comprising:
collecting statistics corresponding to the executing of the project in the first_container.
4. (Previously Presented) The method of claim 2, further comprising:
triggering an alert if the project executing within the first container attempts to use more than the first portion of the first resource.
5. (Previously Presented) The method of claim 2, wherein the project does not use more than the first portion of the first resource while executing in the first container.
6. (Previously Presented) The method of claim 2, wherein the project is placed in the first container by a user listed on an access control list associated with the first container.
7. (Previously Presented) The method of claim 1, further comprising:
specifying resource requirements for the second container; wherein the resource requirements for the second container specify a second requirement for the first resource and a second requirement for the second resource.
8. (Currently Amended) The method of claim 1, further comprising:

determining whether the resource requirements for the second container are valid, wherein the resource requirements for the second container are valid when the second requirement for the first resource does not exceed the first portion of the first resource and the second requirement for the second resource does not exceed the first portion of the second resource; and
activating the second container only if the resource requirements for the second container are valid, wherein activating the second container enables the at least one system user to use the second container.

9. (Canceled)

10. (Canceled)

11. (Previously Presented) The method of claim 1, further comprising:

modifying the first portion of the first resource after the first container is activated.

12. (Previously Presented) The method of claim 11, wherein modifying the first portion of the first resource comprises modifying a container definition of the first container.

13. (Previously Presented) The method of claim 1, wherein creating the first container comprises:

defining a container name;

specifying a minimum CPU requirement for the container;

specifying a maximum physical memory limit; and

specifying a maximum outgoing network bandwidth.

14. (Previously Presented) The method of claim 13, wherein creating the first container further comprises:

specifying a project associated with the first container, wherein the project is one of a plurality of processes.

15. (Previously Presented) The method of claim 14, wherein each of the plurality of processes is identified by a common identifier.

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16. (Previously Presented) The method of claim 1, wherein the first resource is at least one selected from a group consisting of a plurality of processors, physical memory and bandwidth.
17. (Currently Amended) A computer system, comprising:
- a first resource and a second resource;
 - a plurality of resource pools, wherein a first resource pool of the plurality of resource pools is allocated a first portion of the first resource and a first portion of the second resource, and wherein a second resource pool of the plurality of resource pools is allocated a second portion of the first resource and a second portion of the second resource;
 - a plurality of containers residing in the first resource pool, wherein a first container of the plurality of containers comprises a requirements specification for the first resource for the first container and a requirements specification for the second resource for the first container; and
 - a management interface configured to:
 - activate the first container only upon validating[[e]] that the requirements specification for the first resource for the first container does not exceed the first portion of the first resource[[,]] and ~~validate~~ that the requirements specification for the second resource for the first container does not exceed the first portion of the second resource[[.]], and
 - upon receiving an indication of a requirement to deactivate the first container,
 - deactivate the first container by releasing the requirements specification for the first resource and the requirements specification for the second resource from the first container;
 - transfer a project executing in the first container to a default container before the first container is deactivated; and
 - execute the project in the default container.

18. (Previously Presented) The system of claim 17, further comprising:
a database configured to track:
the first portion of the first resource;
the first portion of the second resource;
the requirements specification of the first resource for the first container; and
the requirements specification of the second resource for the first container.
19. (Previously Presented) The system of claim 17, further comprising;
a second container of the plurality of containers, wherein the second container comprises
a requirements specification the first resource for the second container and a
requirements specification for the second resource for the second container;
20. (Original) The system of claim 19, wherein the usage of the first resource and the second resource by the first container and the second container is determined using fair share scheduling.
21. (Original) The system of claim 17, wherein the management interface is configured to modify the requirements specification for the first resource for the first container.
22. (Previously Presented) The system of claim 17, wherein the requirements specification for the first resource for the first container and the requirements specification of the second resource for the first container are included in a container definition of the first container.
23. (Currently Amended) The system claim 17, ~~further comprising: a project configured to execute in the first container,~~ wherein the project corresponds to a network-wide administrative identifier used to identify related processes.
24. (Previously Presented) The system of claim 23, wherein the amount of the first resource used to execute the project in the first container does not exceed the first portion of the first resource allocated to the first container.

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25. (Original) The system of claim 23, wherein the amount of the first resource used to execute the project in the first container does not exceed the requirements specification of the first resource for the first container.
26. (Original) The system of claim 23, wherein the management interface is configured to track usage of the first resource and the second resource by the project.
27. (Original) The system of claim 23, wherein the project is placed in the first container by a user listed on an access control list associated with the first container.
28. (Original) The system of claim 17, further comprising:
 - a first management utility configured to manage the first resource; and
 - a second management utility configured to manage the second resource,wherein the management interface is further configured to interface with the first management utility and the second management utility to manage the portion of the first resource and the portion of the second resource allocated to the resource pool.
29. (Original) The system of claim 17, wherein the management interface is further configured to discover the first resource and the second resource.
30. (Original) The system of claim 17, wherein the first container comprises:
 - a container name;
 - a minimum CPU requirement for the container;
 - a maximum physical memory limit;
 - specifying a maximum outgoing network bandwidth.
31. (Previously Presented) The system of claim 17, wherein the first resource is at least one selected from a group consisting of a plurality of processors, physical memory and bandwidth.

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32. (Currently Amended) A network system having a plurality of nodes, comprising:

a first resource and a second resource;

a plurality of resource pools, wherein a first resource pool of the plurality of resource pools is allocated a first portion of the first resource and a first portion of the second resource, and wherein a second resource pool of the plurality of resource pools is allocated a second portion of the first resource and a second portion of the second resource;

a plurality of containers residing in the resource pool, wherein a first container of the plurality of containers comprises a requirements specification for the first resource for the container and a requirements specification for the second resource for the container; and

a management interface configured to:

activate the first container only upon validating[[e]] that the requirements specification for the first resource for the first container does not exceed the first portion of the first resource[[,]] and ~~validate~~ that the requirements specification for the second resource for the first container does not exceed the first portion of the second resource, and

upon receiving an indication of a requirement to deactivate the first container,

deactivate the first container by releasing the requirements specification for the first resource and the requirements specification for the second resource from the first container;

transfer a project executing in the first container to a default container before the first container is deactivated; and

execute the project in the default container.

wherein the first resource is located on any one of the plurality of nodes,

wherein the second resource is located on any one of the plurality of nodes,

wherein the first resource pool is located on any one of the plurality of nodes,

wherein the first container is located on any one of the plurality of nodes,

wherein the management interface executes on any one of the plurality of nodes, and

wherein the first resource comprises a plurality of processors.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAROLINE ARCOS whose telephone number is (571)270-3151. The examiner can normally be reached on Monday-Thursday 7:00 AM to 5:30 PM.

5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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